What is claimed is:

[Claim 1]   1. An advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the IPMI system comprising:

an IPMI message subsystem having a channel center used to receive/send an IPMI message from message sources, and having a message execution group which initiates a corresponding execution procedure with respect to each IPMI message;

an IPMI core subsystem having a plurality of application units at least one which executes the IPMI message according to the execution procedure of the IPMI message subsystem; and

a central message buffer unit having a memory block which provides a pointer of a corresponding address in the block for temporary storage of each IPMI message wherein each said subsystem just transmits the pointer therebetween thereby reducing times of reading the IPMI message and raising the performance of the IPMI system.

[Claim 2]   2. The advanced IPMI system of claim 1 wherein the channel center further comprises a plurality of channel application interfaces for receiving/sending a corresponding IPMI message from the message sources.

[Claim 3]

3. The advanced IPMI system of claim 2 wherein at least one channel application interface correspondingly connects to a programmable-configured sheet for user definition and provides the function of modular switch and renewal.

[Claim 4]   4. The advanced IPMI system of claim 2 wherein the plurality of channel application interfaces comprises at least an intelligent platform management bus (IPMB) application interface, a keyboard control style application interface (KCS), an intelligent chassis management bus (ICMB) application interface, a universal asynchronous receiver/transmitter (UART) application interface, and a local area network (LAN) application interface.

[Claim 5]   5. The advanced IPMI system of claim 2 wherein at least one channel application interface stores the received IPMI message in the central message buffer unit and transmits a pointer of a corresponding address for the IPMI message.

[Claim 6]   6. The advanced IPMI system of claim 5 wherein the IPMI message subsystem further comprises a message collection unit that collects in queue the pointers transmitted by each channel application interface and transmits the pointers to the message execution group.

[Claim 7]   7. The advanced IPMI system of claim 1 wherein the message execution group further comprises:
 a plurality of message service modules which designates every IPMI message a

    default execution procedure correspondingly wherein at least one execution

    procedure instructs the application units of the IPMI core subsystem for

    executing said IPMI message;

a programmable-configured message sheet which allows the user to define the corresponding relation between every IPMI message and said message service module; and

at least one of multiple message processing units which looks up a corresponding message service module of the message sheet according to every IPMI message and initiates the execution procedure of the message service module.

[Claim 8]   8. The advanced IPMI system of claim 7 wherein the message execution group further programmably configures the multiple message processing units that concurrently multi-process the IPMI messages to enable the advanced IPMI system configurable execution performance.

[Claim 9]   9. The advanced IPMI system of claim 8 wherein the message processing units of the message execution group receive the pointers of the IPMI message and transmit the pointers to the application units of said IPMI core subsystem through the message service modules.

[Claim 10]

10. The advanced IPMI system of claim 9 wherein the application units of said IPMI core subsystem read and process the IPMI message from the central message buffer unit according to the pointer.

[Claim 11]   11. The advanced IPMI system of claim 1 wherein the application units of the IPMI core subsystem comprise at least a simple network management protocol (SNMP) trap, an event daemon, a sensor manager, a

chassis controller, a platform event filter management unit (PEF), a chip management unit, an advanced configuration and power interface (ACPI), a basic general purpose input/output (GPIO), and a power manager.

[Claim 12] 12. The advanced IPMI system of claim 1 wherein the application units of the IPMI core subsystem generate a response message after the execution of said IPMI message.

[Claim 13] 13. The advanced IPMI system of claim 12 wherein the application units of the IPMI core subsystem generate a response pointer of a corresponding address for temporary storage of the response message in the central message buffer unit.

[Claim 14] 14. The advanced IPMI system of claim 13 wherein the IPMI core subsystem transmits the response pointer to the message execution group for releasing the allocated address of said IPMI message in the central message buffer unit.

[Claim 15]

15. The advanced IPMI system of claim 14 wherein the response pointer transmitted through the message execution group to the original channel application interface allows the channel application interface to read a corresponding response message from the central message buffer unit and send it back to the message sources.

[Claim 16]

16. The advanced IPMI system of claim 1 further comprising an operating system (OS) management module having multiple specific mapping functions

for communicating with different types of OS, allowing the advanced IPMI system to function with different OS.

[Claim 17] 17. The advanced IPMI system of claim 1 further comprising a hardware management module having a plurality of driver units for communicating with different baseboard management controllers (BMC), allowing the advanced IPMI system to function in different hardware environments.

[Claim 18]

18. The advanced IPMI system of claim 1 wherein the application units of the IPMI core subsystem further comprise:

a sensor unit having an electrically erasable programmable read only memory (EEPROM) which stores a sensing event of a physical change in a host system;

a cache unit which accesses and stores said sensing event to the EEPROM of the sensor unit; and

a memory control unit which regularly polls a new sensing event in the EEPROM of the sensor unit, and allows the cache unit to access and store the sensing event.

[Claim 19] 19. The advanced IPMI system of claim 18 wherein the cache unit is a random access memory (RAM) and the sensor unit is an I^2C sensor.

[Claim 20] 20. The advanced IPMI system of claim 19 wherein the application units of the IPMI core subsystem further comprise:

a plurality of I²C driver software for driving different I²C sensors; and

an I²C driver management unit for managing said plurality of I²C driver with

an application interface.

[Claim 21] 21. The advanced IPMI system of claim 1 wherein the message sources further comprise a host system and an operating terminal.

[Claim 22] 22. An advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the IPMI system comprising:

a channel center which receives/sends an IPMI message from message

sources;

a plurality of message service modules which designates each IPMI message a

default execution procedure, correspondingly;

a programmable-configured message sheet which allows the user to define

the corresponding relation between each IPMI message and said message

service module; and

a plurality of programmable-configured message processing units which

concurrently multi-process the IPMI messages to enable the advanced IPMI

system for configurable execution performance, by way of each message

processing unit looking up the corresponding message service module of the

message sheet according to each IPMI message and initiating the execution

procedure of the message service module for executing the IPMI message.

[Claim 23]
23. The advanced IPMI system of claim 22 wherein the message processing

unit is a thread and the execution procedure of the message service module is

a routine.

[Claim 24] 24. The advanced IPMI system of claim 22 further comprising:

 a plurality of application units, at least one application unit executing the IPMI

   message according to the execution procedure; and

 a central message buffer unit having a memory block which provides a pointer

   of a corresponding address for temporary storage of each IPMI message

   wherein the pointer transmitted by said application units, is used for

   reducing said application units times of reading the IPMI message and

   raising the performance of the IPMI system.

[Claim 25]
25. The Advanced IPMI system of claim 24 wherein the message processing

units receive the pointers of the IPMI message and then transmit the pointers

to the application units through the message service modules.

[Claim 26] 26. The advanced IPMI system of claim 25 wherein the application
units read and process the IPMI message from the central message buffer unit
according to the pointer.

[Claim 27]   27. An advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the IPMI system comprising:

an operating system (OS) management module having multiple specific mapping functions for communicating with different types of OS, allowing the advanced IPMI system to function with different OS; and

a hardware management module having a plurality of driver units for communicating with different baseboard management controller (BMC), allowing the advanced IPMI system to function in different hardware environments.

[Claim 28]   28. An advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the IPMI system comprising:

a sensor unit having an electrically erasable programmable read only memory (EEPROM) which stores a sensing event of a physical change in a host system;

a cache unit which accesses and stores said sensing event to the EEPROM of the sensor unit; and

a memory control unit which regularly poll a new sensing event in the EEPROM of the sensor unit allowing the cache unit to access and store the sensing event.

[Claim 29]   29. The advanced IPMI system of claim 28 wherein the cache unit is a random access memory (RAM) and the sensor unit is an I^2C sensor.

[Claim 30]

30. An advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the IPMI system comprising:

at least an I^2C sensor for sensing a physical change in a host system;

a plurality of I^2C driver software for driving different I^2C sensors; and

an I^2C driver management unit for managing said plurality of I^2C driver software with an application interface.

[Claim 31] 31. A method for an advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the method comprising:

a channel application interface receiving at least one IPMI message from the message sources;

storing temporarily each said IPMI message in a central message buffer unit and therefore getting a pointer of a corresponding address in the buffer unit for each said IPMI message;

transmitting said pointer to a message execution group;

by the message execution group, executing the IPMI message according to the pointer thereby generating a response message and a response pointer to a corresponding address for temporary storage of the response message in the central message buffer unit;

releasing allocation of the address of said IPMI message in the central

message buffer unit according to the response pointer;

by said channel application interface which is ordered by the message

execution group, sending back the response message to message sources;

and

releasing allocation of the address of the response message in the central

message buffer unit by said channel application interface.

[Claim 32] 32. The method for an advanced IPMI system of claim 31 further comprising verifying the received IPMI message by the channel application interface when message sources are receiving at least one IPMI message.

[Claim 33] 33. The method for an advanced IPMI system of claim 31 further comprising collecting in queue the pointers of the IPMI message by a message collection unit and transmitting the pointers to the message execution group.

[Claim 34] 34. The method for an advanced IPMI system of claim 31 further comprising:

initiating a corresponding execution procedure according to the pointer by

the message execution group and allowing at least one application unit to

execute said IPMI message;

generating a response message after the execution by the application units

and generating a response pointer to a corresponding address for temporary

storage of the response message in the central message buffer unit; and

transmitting the response pointer from the application units to the message

  execution group for execution.

[Claim 35] 35. The method for an advanced IPMI system of claim 31 further comprising releasing by the message execution group the allocation of the address of said IPMI message in the central message buffer unit according to the response pointer.

[Claim 36] 36. The method for an advanced IPMI system of claim 31 further comprising transmitting by the message execution group the response pointer to said channel application interface for reading the response message from the central message buffer unit and sending back the response message to the message sources by the channel application interface.

[Claim 37] 37. The method for an advanced IPMI system of claim 31 wherein a central message buffer unit has a memory block for providing a pointer to a corresponding address for temporary storage of each IPMI message, the pointer is for transmission by said units, reducing times of reading the IPMI message and raising the performance of the IPMI system.

[Claim 38] 38. A method for an advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the method comprising:

 a channel center receiving at least one IPMI message from message sources;

 by a plurality of programmable-configured message processing units, multi-

  processing concurrently the IPMI messages, each initiating according to each

IPMI message a message service module having a default execution procedure;

by at least one application unit, executing the IPMI message according to the execution procedure of the message service module thereby generating a response message; and

sending back the response message to message sources through the channel center.

[Claim 39] 39. The method for an advanced IPMI system of claim 38 further comprising: by the channel center temporarily, storing each said IPMI message in a central message buffer unit and therefore getting a pointer to a corresponding address and transmitting said pointer to the message processing unit.

[Claim 40] 40. The method for an advanced IPMI system of claim 38 further comprising: looking up the corresponding message service module of a programmable-configured message sheet according to the IPMI message and initiating the execution procedure of the message service module for executing the IPMI message, the message sheet defining the corresponding relation between every IPMI message and the message service module.

[Claim 41] 41. The method for an advanced IPMI system of claim 39 further comprising the message processing units transmitting the pointers to the IPMI message through the message service modules to the application units for processing.

[Claim 42]   42. The method for an advanced IPMI system of claim 41 further comprising the application units sending, reading, and processing the IPMI message from the central message buffer unit according to the pointer.

[Claim 43]   43. The method for an advanced IPMI system of claim 38 wherein the application units comprise at least a simple network management protocol (SNMP) trap, an event daemon, a sensor manager, a chassis controller, a platform event filter management unit (PEF), an I^2C driver management unit, a memory control unit, a chip management unit, an advanced configuration and power interface (ACPI), a basic general purpose input/output (GPIO), and a power manager.

[Claim 44]   44. The method for an advanced IPMI system of claim 38 wherein the message processing unit is a thread and the execution procedure of the message service module is a routine.

[Claim 45]   45. A method for an advanced intelligent platform management interface (IPMI) system with multi-message and configurable performance, optimally used among message sources, the method comprising:

storing by a sensor unit a sensing event of a physical change in a host system

in an electrically erasable programmable read only memory (EEPROM);

polling regularly by a memory control unit a new sensing event in the EEPROM

of the sensor unit;

controlling a cache unit for accessing and storing a new sensing event of the

EEPROM of the sensor unit; and

reading by the memory control unit the sensing event from the cache unit

according to the request of message sources.

[Claim 46] 46. The method for an advanced IPMI system of claim 45 wherein the message sources is a host system and/or an operating terminal.

[Claim 47] 47. The method for an advanced IPMI system of claim 45 wherein the cache unit is a random access memory (RAM) and the sensor unit is an I^2C sensor.

[Claim 48] 48. The method for an advanced IPMI system of claim 45 wherein the sensor unit further comprises:

a plurality of I^2C driver software for driving different I^2C sensors; and

an I^2C driver management unit for managing said plurality of I^2C driver software with application interface.